PRELIMINARY AND SHORT REPORT

EFFECT OF ORAL STEROID ON NON-INFLAMMATORY SCALP RINGWORM*

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The chance observation of a co-existing alopecia areata and ringworm of the scalp in a child led to a preliminary therapeutic trial which may be of both theoretical and practical importance, i.e., the possibility that oral steroid therapy may influence the course of non-inflammatory ringworm of the scalp.

A nine-year-old Negro boy was seen at Children's Hospital for alopecia areata of two years' duration. The child also had non-inflammatory ringworm infection of the scalp with typical fluorescence of broken-off hairs on examination with Wood's light. This infection was not present five months earlier when the patient had a routine school examination (Wood's light).

After 2 weeks of oral prednisone therapy (Meticorten† 5 mgm. four times daily) for alopecia areata and of local therapy with Asterol ointment for the ringworm, there was a definite lessening of the number of fluorescent hairs in the ringworm sites. The application of Asterol ointment was then discontinued and the patient was given oral steroid therapy only. *At the end of six weeks there was no evidence of fluorescence under the Wood's light.* The alopecia areata was greatly improved.

Subsequently, a small pilot experiment was carried out on eight children with non-inflammatory tinea capitis due to *M. canis*. All these patients had involvement of at least two-thirds of the scalp and had been refractory to topical therapy. After 4 to 10 weeks of oral prednisone therapy (20–25 mgm. daily) all the patients demonstrated a marked change in the affected scalp hairs—either in a marked decrease in number of broken-off fluorescent hairs or in a peculiar change of the fluorescence from brilliant emerald green to a greyish-white hue. It was especially interesting to note that wherever fluorescence could no longer be observed, hairs of normal length were present. It was not possible to determine (without biopsy specimen) whether these hairs were previously "broken-off" or were hairs not previously affected. No definite cures have been observed so far; but in one of the eight patients, after seven weeks of therapy, only one fluorescent hair remained.

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† Meticorten kindly supplied by Schering Corporation, Bloomfield, New Jersey.
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DISCUSSION

These observations are, of course, preliminary. It cannot be said whether the steroid therapy has effected a real (temporary or permanent) cure. In the first patient cited, the possibility that steroid therapy coincided with spontaneous cure cannot be ruled out with certainty. In the other patients, the question arises whether the marked decrease in number of broken-off fluorescent hairs and the change in the hue of fluorescence are evidence of a change in the infection proper or only a change in the phenomenon of fluorescence; or whether the hair growth has been altered in such a manner as to retard or reject fungus invasion. Nevertheless the change has been conspicuous enough to warrant calling attention to this peculiar effect. Should future observations confirm the suspicion that systemic steroid therapy influences the course of ringworm of the scalp in children, the interesting question of the mechanism of action will require investigation. Thus, the seeming influence of steroids on the infected hairs may really be the result of change in the hair cycle. Evidence for this explanation already exists in the observations of Kligman (1) that microspora infect only anagen hairs and the finding by Herrmann, *et al.* (2) that steroids prolong the telogen phase.

SUMMARY

In one case of ringworm of the scalp in an eight-year-old boy, the infection cleared in six weeks after initiation of oral systemic steroid therapy (prednisone, 5 mgm. four times daily). In eight subsequent patients no complete cure has yet been achieved, but in several, the number of broken-off fluorescent hairs decreased rapidly after such therapy was started. Often a change of fluorescence from emerald green to greyish-white was observed. Further observations are required to confirm and to interpret these effects.

REFERENCES

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